No. 9300121

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Delta and Pine Land Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR [illegible]PORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE [illegible] PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT [illegible]D BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'DP 3682'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-ninth day of September in the year of our Lord one thousand nine hundred and ninety-five.

Attest:

Marsha A. Stanton

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1 NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
DELTA AND PINE LAND COMPANY

2 TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
DPX 3682

3 VARIETY NAME
DP 3682

4 ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
100 MAIN STREET
SCOTT, MS 38772

5 PHONE *(include area code)*
(601) 742-3351

FOR OFFICIAL USE ONLY

PVPO NUMBER
9300121

FILING
Date: 02/16/93
Time: 11:45 [X] A.M. [ ] P.M

FEES RECEIVED
Filing and Examination Fee: $2325.00
Date: 02/16/93
Certificate Fee: $275.00 ~~$125.00~~
Date: 6/8/95 & 07/28/95

6 GENUS AND SPECIES NAME
Glycine max

7 FAMILY NAME *(Botanical)*
Leguminosae

8 CROP KIND NAME *(Common Name)*
Soybean

9 DATE OF DETERMINATION
1988

10 IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11 IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12 DATE OF INCORPORATION

13 NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Dr. Harry Collins
P.O. Box 157
Scott, MS 38772

PHONE *(include area code)*:

14 CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

- a [X] Exhibit A, Origin and Breeding History of the Variety
- b [X] Exhibit B, Novelty Statement
- c [X] Exhibit C, Objective Description of Variety
- d [X] Exhibit D, Additional Description of Variety
- e [X] Exhibit E, Statement of the Basis of Applicant's Ownership
- f [X] Seed Sample (2,500 viable untreated seeds) Date Seed Sample mailed to Plant Variety Protection Office _____
- g [X] Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

15 DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
[ ] YES *(If "YES," answer items 16 and 17 below)* [X] NO *(If "NO," skip to item 18 below)*

16 DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[ ] YES [ ] NO

17 IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

18 DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
[ ] YES *(If "YES," through* [ ] Plant Variety Protection Act [ ] Patent Act Give date _____)
[X] NO

19 HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
[X] YES (If "YES," give names of countries and dates) USA - April 1992
[ ] NO

20 The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE
J. Grover Shannon	Coor. of Int'l Research	2/9/93
	Midsouth Soybean Breeder	2/8/93
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE
Harry B. Collins	Vice President Director of Research	2-9-93

EXHIBIT A

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3682

ORIGIN AND BREEDING HISTORY

1983 - Cross 83169 - DP 417 * Foster made at Kenly, NC

1984 - F_1 advanced to F_2

1985 - F_2 advanced to F_3

1986 - F_3 advanced to F_4

1987 - F_4 single plants selected from 83169 F_4 bulk population.

1988 - F_5 plant row 88-05137 selected and found to be stable and breeding true for major characteristics.

1989 - Entered in Southeast preliminary yield tests at Kenly, NC.

1990 - 1991 Grown at several locations each year across the Midsouth and Southeast. Seed increase was initiated.

1992 - Entered in State Experiment Station Tests in the Midsouth and Southeast as DPX 3682.

1993 - Released as DP 3682.

EXHIBIT B

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3682

NOVELTY STATEMENT

To our knowledge DP 3682 most nearly resembles P 9641 and H 6686. Differences include but are not necessarily restricted to the following:

1) DP 3682 differs from P 9641 in that DP 3682 has resistance to race 3 soybean cyst nematode and P 9641 is susceptible. DP 3682 is susceptible to frogeye leaf spot and P 9641 is resistant. Also DP 3682 averages 6-8 days later than P 9641.

2) DP 3682 differs from H 6686 in that pubescence of DP 3682 is gray and H 6686 is tawny. DP 3682 seed are smaller than H 6686 averaging 12 g/100 seed compared to 17 g/100 for H 6686. DP 3682 is resistant to sudden death syndrome (SDS), rating 1.0 whereas H 6686 is very susceptible, rating 4.0. DP 3682 is very susceptible to frogeye leaf spot, rating 4.7 compared to H 6686 which is very resistant, rating 1.0.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Delta and Pine Land Company	DPX 3682	DP 3682

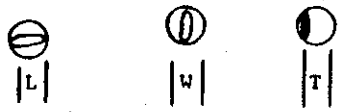
ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*
100 Main Street
Scott, MS 38772

FOR OFFICIAL USE ONLY
PVPO NUMBER
9300121

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ **2. SEED COAT COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[2] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ **4. SEED SIZE: (Mature Seed)**

[1][2] Grams per 100 seeds

★ **5. HILUM COLOR: (Mature Seed)**

[5] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ **6. COTYLEDON COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green

★ **7. SEED PROTEIN PEROXIDASE ACTIVITY:**

[2] 1 = Low 2 = High

★ **8. SEED PROTEIN ELECTROPHORETIC BAND:**

[ ] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ **9. HYPOCOTYL COLOR:**

[3] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ **10. LEAFLET SHAPE:**

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17') 3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[2] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton') 3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[2] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[1] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[1] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton') 3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will') 3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0][9] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V 9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)**

BACTERIAL DISEASES:

★ [2] Bacterial Pustule *(Xanthomonas phaseoli* var. *sojensis)*

★ [0] Bacterial Blight *(Pseudomonas glycinea)*

★ [0] Wildfire *(Pseudomonas tabaci)*

FUNGAL DISEASES:

★ [0] Brown Spot *(Septoria glycines)*

Frogeye Leaf Spot *(Cercospora sojina)*

★ [ ] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [1] Other *(Specify)* Races unknown

[0] Target Spot *(Corynespora cassiicola)*

[0] Downy Mildew *(Peronospora trifoliorum* var. *manshurica)*

[0] Powdery Mildew *(Microsphaera diffusa)*

★ [0] Brown Stem Rot *(Cephalosporium gregatum)*

[2] Stem Canker *(Diaporthe phaseolorum* var. *caulivora)* (Moderately resistant to Moderately Susceptible)

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

★ [1] Race 1 [ ] Race 2 [ ] Race 3 [ ] Race 4 [ ] Race 5 [ ] Race 6 [ ] Race 7

[ ] Race 8 [ ] Race 9 [ ] Other *(Specify)* _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [ ] Race 1 [ ] Race 2 [2] Race 3 [ ] Race 4 [ ] Other *(Specify)* _____

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [2] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[2] Peanut Root Knot Nematode *(Meloidogyne arenaria)* Moderately resistant

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[ ] OTHER DISEASE NOT ON FORM *(Specify)*: _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [ ] Iron Chlorosis on Calcareous Soil

[X] Other *(Specify)* Sensitive to high chloride soils

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[0] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	P 9641	Seed Coat Luster	Foster
Leaf Shape	P 9641	Seed Size	Centennial
Leaf Color	Foster	Seed Shape	Centennial
Leaf Size	P 9641	Seedling Pigmentation	Foster

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

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VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
DP 3682 Submitted	150	2.0	81	–	–	34.9	19.7	12	–
H 6686 Name of Similar Variety	149	2.0	79	–	–	35.6	19.7	17	–

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBT1-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3682

ADDITIONAL DESCRIPTION OF VARIETY

DP 3682 is derived from an F_4 plant selection composited in the F_5 from the cross DP 417 * Foster made at Kenly, NC. DP 3682 is being released as a replacement for DP 726, DP 566 and DP 506 because of its excellent yield performance, disease resistance and broad adaptation as compared to DP 726, DP 506 and DP 566.

DP 3682 is a late group VI averaging 9% higher yield, 2 days earlier, 2 inches shorter, larger seed, better lodging resistance and root knot resistance when compared to DP 726. It has purple flowers, grey pubescence, and tan pods. Seeds are shiny yellow averaging 3650 seeds/lb. Hila are normally imperfect black, but nay vary from buff to black depending on environmental effects.

DP 3682 is similar in resistance to DP 726 for races 1 and 3 of cyst nematode and stem canker resistance, but is has resistance to common root knot nematode and moderate resistance to peanut root knot nematode. It does not have major gene resistance to phytophthora root rot, but has shown good performance on clay soils where phytophthora is often a problem. DP 3682 is susceptible to frogeye leaf spot.

EXHIBIT E

DELTA AND PINE LAND COMPANY'S APPLICATION FOR DP 3682

STATEMENT OF APPLICANT'S OWNERSHIP

DP 3682 was originated and developed by Tom Wofford, Ph.D., and Grover Shannon, Ph.D., Delta and Pine Land Company Plant Breeders. By agreement between employee and Delta and Pine Land Company, all rights to any invention, discovery or development made by an employee are assigned to the company. No rights to such an invention or discovery are retained by the employee.

SOYBEAN PRODUCT NOMINATION FORM

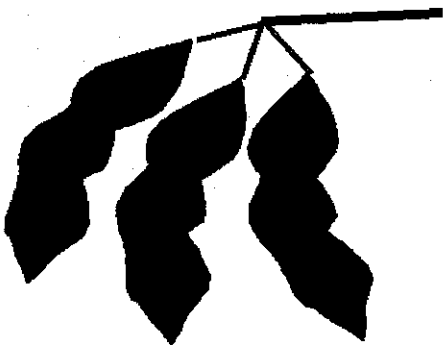
Suggested Nominee Number: DP 3682

Experimental Designations: DPX 3682, DPX 1282, 88-05137

Submitted by: Tom Wofford and Grover Shannon (Project Leaders)

Date Submitted: January 1, 1993

Parentage: DP 417 * Foster



Data Collected from 37 Replicated Yield Tests.

I. Plant & Seed Characteristics:

Flower Color:	Purple
Pubescence Color:	Grey
Hilum Color:	Imperfect Black
Pod Wall Color:	Tan
Seed Coat Luster:	Shiny
Leaf Shape:	Ovate
Plant Type:	Determinate
Peroxidase Activity:	Positive

II. Agronomic Characteristics:

1990-92

Line	Mat.	Plant Height	Ldg.	Shat.	Seeds/ Lb.	% Pro.	% Oil
DP 3682 Nominee	+1	32	2.0	Exc.	3681	34.9	19.7
H 6686 Check	0	31	2.0	Exc.	2569	35.6	19.7
A 6785 Check	-4	32	2.5	Exc.	4223	35.3	19.7
DP 726 Check	+2	35	2.6	Exc.	4263	35.4	19.6

III. Yield Data:

1990-92 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat	Hgt	Ldg
DP 3682	49.5	106	+8	32	2.0
A 6785	48.1	103	+4	32	2.5
H 6686	47.9	102	+7	31	2.0
Young	46.8	100	0	35	2.3
DP 726	45.4	97	+10	35	2.6
# Tests	37	37	17	25	16

1992 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat	Hgt	Ldg
A 6785	46.7	107	+5	31	2.6
DP 3682	46.5	107	+7	29	1.9
Young	43.6	100	0	36	2.6
DP 726	42.6	98	+9	33	2.6
H 6686	42.3	97	+5	29	1.8
# Tests	13	13	5	11	5

1991 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat	Hgt	Ldg
DP 3682	52.8	115	+8	33	2.1
H 6686	49.6	108	+7	31	2.1
A 6785	47.5	103	+4	31	2.4
DP 726	47.1	102	+11	35	2.6
Young	46.0	100	0	34	2.1
Centennial	44.5	97	+7	33	2.4
# Tests	13	13	6	8	6

1990 Yield & Agronomic Data Summary

Line	Yield	% Yield	Mat	Hgt	Ldg
H 6686	49.6	108	+6	32	2.0
DP 3682	47.5	104	+7	35	2.0
A 6785	47.0	103	+4	33	2.5
Young	45.8	100	0	36	2.1
DP 726	44.7	97	+9	37	2.6
Centennial	43.1	94	+6	34	2.2
# Tests	11	11	6	7	5

YIELD SUMMARY IN BU/A

By Region: 1990-92

	Midsouth		Southeast		Overall Mean	
Line	Yield	%Yield	Yield	% Yield	Yield	% Yield
DP 3682	51.1	112	46.9	100	49.5	106
A 6785	48.3	106	46.9	100	48.1	103
H 6686	49.1	108	45.5	97	47.9	102
Young	45.5	100	46.7	100	46.8	100
DP 726	45.5	100	45.1	97	45.4	97
# Tests	24	24	13	13	37	37

IV. DISEASE REACTION AND OTHER INFORMATION:

Cyst Nematode

DP 3682 is resistant to races 1 and 3 of Soybean Cyst Nematode, but susceptible to race 14 (race 4).

Race 3 (Score)	1 2 3 4 5	1 2 3 4 5
DP 3682	7 0 0 0 0	3 4 0 0 0
Centennial	7 0 0 0 0	0 0 0 0 0
Bedford	- - - - -	- - - - -
Essex	0 0 0 0 6	0 0 0 0 7
Location:	Jackson, TN 1991	Jackson, TN 1992
Conducted by:	Dr. L. Young, USDA Nematologist	

Race 14 (Score)	1 2 3 4 5	1 2 3 4 5
DP 3682	0 0 0 0 5	0 2 4 0 4
Centennial	0 0 0 0 7	0 0 0 7 3
Bedford	5 1 0 0 0	0 0 3 6 1
Essex	- - - - -	0 2 4 3 0
Location:	Jackson, TN 1991	Scott, Gnhse 1992
Conducted by:	Dr. L. Young USDA Nematologist	Grover Shannon & Grady Robinson

Root Knot Nematode 1 = No galling 5 = Very severe galling

DP 3682 is resistant to common Root Knot Nematode and moderately resistant to peanut Root Knot Nematode.

	Common Root Knot M. incognita				Peanut Root Knot M. arenaria	
	1989[1]	1990[2]	1990[3]	1992[4]	1989[3]	1990[3]
DP 3682	1.8	2.0	1.8	1.0	4.5	3.0
DP 726	4.3	3.3	2.2	1.3	4.0	4.5
Cent.	1.3	1.5	1.0	-	5.0	4.5
H 6686	1.5	3.3	2.2	1.3	5.0	4.0
A 6785	1.3	1.5	1.5	1.3	3.5	3.5
Young	4.0	4.5	4.2	3.7	5.0	4.0

Location: Hattiesburg, MS[1], Allendale, SC[2], Jay, FL[3] and Orangeburg, SC[4]

Conducted by: Grover Shannon & Grady Robinson[1]
Dr. Tom Wofford[2]
Dr. R. Kinloch[3], Nematologist, Univ. of Florida
Dr. Cindy Green & Chris Daniels[4]

13

Stem Canker 1 = No symptoms 5 = Very severe symptoms
DP 3682 is moderately resistant to Stem Canker.

	1990	1991
DP 3682	1.0	1.5
DP 726	1.3	2.0
Centennial	2.0	2.0
H 6686	1.0	1.0
A 6785	4.5	1.0
Young	2.8	3.5

Location: Scott, MS

Conducted by: Grover Shannon & Grady Robinson

Frogeye Leaf Spot 1 = None 5 = Very Severe
DP 3682 is susceptible to Frogeye Leaf Spot.

	1989	1991
DP 3682	4.7	3.0
DP 726	4.3	3.0
Centennial	4.3	3.7
H 6686	1.0	1.0
A 6785	1.0	1.0
Young	1.0	1.0

Location: Lake Providence, LA & Morganza, LA

Conducted by: Grover Shannon & Grady Robinson

Sudden Death Syndrome 1 = None 5 = Very severe
DP 3682 is moderately resistant to Sudden Death Syndrome.

	1992
DP 3682	1.0
DP 726	1.7
H 6686	4.0
A 6785	1.0

Location: Brinkley, AR

Conducted by: Grover Shannon

Aerial Blight 1 = None 5 = Very severe

DP 3682 is moderately susceptible to Aerial Blight.

	1992
DP 3682	2.7
DP 726	2.0
H 6626	3.7
A 6785	2.0
Young	2.3
P 9641	3.3

Location: Morganza, LA

Conducted by: Grover Shannon

Herbicide Tolerance

DP 3682 has no known sensitivity to common soybean herbicides when used as directed. It has above normal tolerance to Metribuzin.

Chloride Tolerance

DP 3682 is sensitive to high chloride.

Variety Description

DP 3682

DP 3682 is derived from an F_4 plant selection composited in the F_5 from the cross DP 417 * Foster made at Kenly, NC. DP 3682 is being released as a replacement for DP 726, DP 566 and DP 506 because of its excellent yield performance, disease resistance and broad adaptation as compared to DP 726, DP 506 and DP 566.

DP 3682 is a late group VI averaging 9% higher yield, 2 days earlier, 2 inches shorter, larger seed, better lodging resistance and root knot resistance when compared to DP 726. It has purple flowers, grey pubescence, and tan pods. Seeds are shiny yellow averaging 3600 seeds/lb. Hila are normally imperfect black, but may vary from buff to black depending on environmental effects.

DP 3682 is similar in resistance to DP 726 for races 1 and 3 of cyst nematode and stem canker resistance, but it has resistance to common root knot nematode and moderate resistance to peanut root knot nematode. It does not have major gene resistance to phytophthora root rot, but has shown good performance on clay soils where phytophthora is often a problem. DP 3682 is susceptible to frogeye leaf spot.

KEY FEATURES

- Excellent yield potential over Midsouth and Southeast
- Resistant to races 1 and 3 cyst nematode
- Resistant to common root knot nematode
- Moderately resistant to peanut root knot nematode
- Field resistance to phytophthora root rot
- Susceptible to frogeye leaf spot

CHARACTERISTICS

Maturity	Late Group V
Flower Color	Purple
Pubescence Color	Grey
Hilum Color	Imperfect Black
Lodging Resistance	Very Good
Plant Height	Medium
Shatter Resistance	Excellent
Seed Size	Medium - 3600 Seed/lb
Stem Canker	Moderately Resistant
Phytophthora Root Rot	Field Resistant
Cyst Nematode	Resistant to Races 1 and 3
Common Root Knot Nematode	Resistant
Peanut Root Knot Nematode	Moderately Resistant
Lance Nematode	Tolerant
Red Crown Rot	Unknown
Aerial Blight	Susceptible
Frogeye Leaf Spot	Susceptible
Metribuzin	Tolerant
High Chloride	Sensitive